

**What is claimed is:**

1. A method for updating communication equipment in a communication system through a server, which stores updated files used for updating the communication equipment, comprising:

- 5       a. backing up configuration data in the communication equipment to the server;  
      b. downloading the updated files to the communication equipment from the server, and loading the updated files to the communication equipment to implement the communication equipment update;  
      c. recovering the configuration data backed up in the server to the communication  
10     equipment.

2. The method according to Claim 1, wherein, the step a further comprises:

- the server monitoring the backup procedure of the configuration data and judging whether the configuration data are successfully backed up, if yes, executing the step b; otherwise, instructing the communication equipment to execute the backup operation for  
15     the configuration data again.

3. The method according to Claim 2, wherein, the step of the server judging whether the configuration data are successfully backed up comprises one of the two following procedures:

- judging whether a backup failure message is received from the communication  
20     equipment; and  
      judging whether the backup operation exceeds a scheduled time.

4. The method according to Claim 2, before instructing the communication equipment to execute the backup operation for the configuration data again further comprising:

- notifying a user the current configuration data backup has failed and asking the user  
25     whether to back up the data over again; after receiving the user's instruction to back up the data over again, executing the step of instructing the communication equipment to execute the backup operation again; otherwise, ending the current process.

5. The method according to Claim 1, wherein, the communication equipment is an Integrated Access Device (IAD) and the server is a File Transfer Protocol/Trivial File  
30     Transfer Protocol (FTP/TFTP) server, and the step a further comprises:

an IAD Management System (IADMS) sending a Simple Network Management Protocol (SNMP) backup configuration data command to the IAD;

and the step a of backing up the configuration data in the communication equipment to the server comprises: after receiving the SNMP backup configuration data command, the  
5 IAD transmitting the configuration data files to the specified FTP/TFTP server via the FTP/TFTP protocol.

6. The method according to Claim 1, wherein, the configuration data comprise one or more than one type among user data, port data, protocol parameter data and default parameter data for guaranteeing the normal operation of the equipment.

10 7. The method according to Claim 1, wherein, the step b further comprises:  
the server monitoring the update procedure of the communication equipment and judging whether the update is successful, if yes, executing the step c; otherwise, instructing the communication equipment to execute the update operation over again.

15 8. The method according to Claim 7, wherein, the step of the server judging whether the update is successful comprises one of the two following procedures:

judging whether an update failure message is received from the communication equipment; and

judging whether the update operation exceeds the scheduled time.

20 9. The method according to Claim 7, before instructing the communication equipment to execute the update operation again further comprising:

notifying the user that the current update has failed and asking the user whether to update the equipment over again; after receiving the user's instruction to update the equipment over again, executing the step of instructing the communication equipment to execute the update operation over again; otherwise, ending the current process.

25 10. The method according to Claim 7, further comprising: a step of storing an old software version in the communication equipment before executing the update operation, and

a step of instructing the communication equipment to recover the current software to the old version before instructing the communication equipment to execute the update  
30 operation over again.

11. The method according to Claim 1, wherein, the communication equipment is the IAD, and the server is the FTP/TFTP server, and the step b further comprises:

the IADMS sending an SNMP update command which comprises the address information of the FTP/TFTP server and the name information of the updated files;

5 and the step b of downloading the updated files to the communication equipment from the server and loading the updated files to the communication equipment comprises:

after receiving the SNMP update command, the IAD downloading the updated files corresponding to the updated files name from the specified FTP/TFTP server via the FTP/TFTP protocol, and then loading the updated files.

10 12. The method according to Claim 1, wherein, the step c further comprises:

the server monitoring the recovery procedure of the configuration data, and judging whether the configuration data are successfully recovered, if yes, ending the current process; otherwise, instructing the communication equipment to execute the recovery operation for the configuration data over again.

15 13. The method according to Claim 12, wherein, the step of the server judging whether the configuration data are successful recovered comprises one of the two following procedures:

judging whether a recovery failure message is received from the communication equipment; and

20 judging whether the recovery operation exceeds the scheduled time.

14. The method according to Claim 12, before instructing the communication equipment to execute the recovery operation for the configuration data over again, further comprising:

notifying the user that the current configuration data recovery has failed and asking the user whether to recover the configuration data over again; after receiving the user's instruction to recover the configuration data over again, executing the step of instructing the communication equipment to execute the recovery operation over again; otherwise, ending the current process.

15. The method according to Claim 1, wherein, the communication equipment is the IAD, and the server is the FTP/TFTP server, and the step c further comprises:

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the IADMS sending an SNMP recovery configuration data command which comprises the address information of the FTP/TFTP server and the name information of the configuration data files;

5 and the step c of recovering the configuration data backed up in the server to the communication equipment comprises:

after receiving the SNMP recovery configuration data command, the IAD downloading the configuration data files corresponding to the configuration data files name from the specified FTP/TFTP server via the FTP/TFTP protocol, and then loading the configuration data files.

10 16. The method according to Claim 1, wherein, the step c further comprises a step of modifying the format of the configuration data.